BOOK REVIEW

Erie: The Lake that Survived. Noel M. Burns. 1985. Rowman and Allanheld Publishers, Totowa, New Jersey 07512. 320 p. $34.95 cloth.

Dr. Noel Burns was a Research Scientist at the Canada Centre for Inland Waters, Burlington, Ontario for 14 years and was appointed head of the Great Lakes Section in 1980. He is currently Scientist-in-Charge of the Water Quality Centre, Ministry of Works and Development, Hamilton, New Zealand. Dr. Burns'experiences on Lake Erie more than qualify him to recount the degradation and rebirth of the lake. This book is a must for aquatic biologists, ecologists, and those interested in Lake Erie and the Great Lakes.

The book is divided into 12 chapters and four parts: History, Processes in Lake Erie, The Basins and Their Biology, and Alternatives and Decisions. The three chapters in the "History" section do more than outline the geological formation of Lake Erie. They describe the Indian occupation of the region, the discovery by white man, and the subsequent development of the shoreline. By describing the attitude of the early settlers and the hardships they faced, Burns provides the rationale for what we consider today to have been indiscriminate clearing of the land and a total disregard for natural resources. He also provides rationale for the location of Lake Erie's major cities and the industries which severely impacted the lake.

The section on "Processes in Lake Erie" is extremely thorough and provides the reader with the necessary background to understand and interpret the effects of various pollutants on the individual basins, as discussed in the third section, "The Basins and Their Biology." The section on processes includes discussions of climate, weather, erosion, water movement, sediment transport, the loading of nutrient and non-toxic materials, and a good discussion of contaminants. This section and the section on the basins would be excellent outside readings for students in limnology, aquatic biology, or aquatic ecology courses.

Part three, on the three basins of Lake Erie, builds on the information provided in the section on processes, to discuss the central basin's anoxic hypolimnion and man's efforts to reverse the eutrophication process. Included here are excellent discussions of the loss of the mayfly from the western basin and the progressive elimination of the lake's high value fish species (e.g., the blue pike).

The final section of the book, "Alternatives and Decisions," deals with the issues involved in managing a lake as large and diverse as Erie, and the corresponding difficulty of measuring the success or failure of our efforts to reverse the degradation process.

This is a book which should be in your aquatic library. It is well illustrated with over 100 photographs and figures. It documents the partial, hard-fought restoration of Lake Erie that has become a national symbol both of society's neglect and its ability, given sufficient public awareness and bureaucratic will, to implement effective remedial measures.

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